

B1 A disposable pant for adults, toddlers and infants is provided. The pant has elastic side panels of sufficient width to be able to wrap around the pant when loaded with bodily wastes so as to form an elastic pouch for disposal. In an embodiment of the pant there is provided a pant having a body having a front end, a back end, and a crotch area. The body has a chassis, a front fastening panel, and two elastic side panels.

A marked up version is attached as Exhibit 1.

In the Specification

Please delete the paragraphs starting at page 2, line 4 and extending to line 17.

Please insert the following paragraphs at page 31, lines 3 (these are identical to the paragraphs deleted from page 2):

B2 In yet a further embodiment there is provided a pant product for toddlers and infants comprising: refastenable elastic side panels; the side panels having a length and a width; the product having a length and a width, the width of an elastic side panel being at least long enough to fully surround the product when used and fasten to itself, thereby forming an elastic disposable pouch. This product when used may hold at least about 25 grams of bodily waste. This product when used may further hold at least about 100 grams of bodily waste.

In still another embodiment there is provided a pant product comprising a chassis and one elastic back panel; where the back panel can be separated into a left side portion and a right side portion by the centerline of the product; and each side portion having a length and a width; the product having a length and a width; the width of one of the elastic side portions being at least long enough to encircle the product when used and fasten to itself, thereby forming an elastic disposable pouch.

A marked up version of the paragraph is attached as exhibit 5.

Please delete the paragraph starting at page 2, line 28 and going through page 3 line 18 and substitute in its place the following paragraph:

B3 A construction of one embodiment of the pant is generally shown in Figures 1A and 1B, with Figure 1A showing the bodyside or inside of the pant and Figure 1B showing the outside of the pant. Referring to these figures, the pant consists of a body 1 having a front end 2, a back end 3, and a crotch area 17. The body has a chassis 4, a front fastening panel 5, and two elastic side panels 6 and 7. On each of the elastic side panels there are positioned closure devices 8 and 9 respectively. In these Figures, three such devices are shown for each side panel. Fewer or more closure devices may also be used. In the chassis, there may be positioned crotch elastics 10 and 11, an absorbent core or pad 12 and cuffs 13 and 14. On the bodyside of the chassis there may be a bodyside liner sheet 15, which may cover the absorbent pad. The relationship of the size of the elastic panels, the chassis and the front fastening panel, as well as the number and position of the closure devices, provides the ability to have a single product conformably and securely fit a wide range of sizes, body shapes and age groups (e.g. infants, toddlers and adults). As discussed herein unless specifically mentioned otherwise, when referring to the dimensions and size of elasticized components of the pant, these dimensions and sizes will be for the actual size of the component, i.e., the maximum size under tension, and not for the size of the component when tension is relaxed, i.e., the smaller size as the elastics contract.

A marked up version is attached as exhibit 6.

Please delete the paragraphs starting at page ⁴3, line 3 through line 11 and in its place substitute the following paragraphs:

B4 Generally, the length 22 of the fastening panel is at least about 15% of the length of the pant and ideally the length of the fastening panel is at least about 20% of the length of the pant. Generally, the combined length of the elastic panels and the front fastening panel (the sum of 22 and 23) should be at least about 7% of the length of the total pant. Optimally, this combined length should be at least about 25% of the total pant and ideally this combined length should be from about 40% to about 60% of the length of the pant.

Generally, the widths of the front and back ends of the chassis are the same. However, the chassis may be wider in front or back.

A marked up version is attached as exhibit 7.

Please delete the paragraphs starting at page 5 line 4 through page 6 line 16 and in there place substitute the following paragraphs:

sub 27 35 Generally, the elastic side panels can be attached to the chassis by any suitable technique known to the art. The elastic side panels can be positioned between the backing member and the bodyside liner, on the bodyside of the bodyside liner or on the outside of the backing member. Optimally, they are positioned in-between the backing member and the bodyside liner. The elastic side panels and the chassis can overlap to greater or lesser extents depending upon the overall size of the pant, the length of the elastic panel, the strength of the components, the type of attachment used (i.e., glue, ultrasonic, etc.) and the costs associated with those components. By way of illustration, if the elastic side panels are attached to the outside of the chassis, they could overlap the chassis by about 5% to about 25% or more of the chassis width. When the elastic side panels are positioned between the bodyside liner and the backing member they should overlap these layers sufficiently for the manner of attachment to be effective. By way of illustration, and without any limitation on the size of the product, in a product for an adult having an overall width (the sum of 18, 19 and 20) of about 27 inches (686

mm), 36 inches in state under tension (914 mm) and a chassis width 20 of about 13½ inches (343 mm), the overlap should optimally be about from ¼ of an inch (6.4 mm) to about 1½ inches (38 mm).

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The elastic side panels can be attached to the chassis by the use of adhesives, ultrasonic bonding, heat, pressure, or any other technique known to the art. Generally, any type of adhesive that can provide a strong bond can be used. These would include by way of illustration hot melt adhesives, solvent-based adhesives, pressure sensitive adhesives, elastic attachment adhesives, and thermoset adhesives. Ideally, a hot melt adhesive may be used. By way of illustration, and with out any limitation on the types of adhesive that can be used, suitable hot melt adhesives can be obtained from: Ato-Findley Adhesives located in Wauwatosa, Wisconsin under the trade names H-2525A or H2096; and National Starch & Chemical Corporation located in Bridgewater, New Jersey under the trade name 34-5610.

The adhesives may be applied through any number of techniques and in any number of patterns known to the art, which include by way of example and without limitation, spray, meltblown, slot coat, roll coat, gravure, spiral, rows, strips, or dots.

Ultrasonic bonding of the components can be accomplished by using any ultrasonic bonding device known to the art. Such devices can be obtained for example from BRANSON® or DUKANE®. The pattern for the ultrasonic bond or weld should be such that it permits a good attachment of the components without adding unnecessarily to the stiffness of the pant, although as described herein in at least one embodiment having some stiffness in these bonds is desirable. Such patterns include by way of example and without limitation, staggered dots, aligned dots, bars, crescents, or combinations of these. The pattern can be achieved either by plunge bonding or rotary ultrasonic bonding.

A marked up version of this paragraph is submitted as Exhibit 8.

Please delete the paragraph at page 8, lines 10-25 and in its place substitute the following paragraph:

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The elastic side panel may be made from any material that has elastic properties. It may be single layer or have multiple layers. For example, it may be made from a

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multilayered material consisting of elastic filaments, fibers, sheets, ribbon or strands sandwiched between two layers of fabric. It may be made from material such as by way of example, the types of materials disclosed in Wideman U.S. Patent No. 4,606,964 and Johnson U.S. Patent No. 3,371,668, the disclosures of which are herein incorporated by reference. It may be made from a stretch bonded laminate type material, which consists of two layers of material and an elastomeric web that is melt blown or extruded as filaments between these two layers. It can also be a neck bonded type material or neck-bonded-laminate (NBL). The two layers can be, by way of example and without limitation, spunbonded material, such as spunbonded polypropylene, or they may be rayon or a woven fabric type material, or film or apertured film. They may be breathable or non-breathable, although for use as elastic side panels it is preferable that the material be breathable. The elastomeric web may be made from KRATON®.

A marked up version is attached as exhibit 9.

Please delete the paragraph page 10, lines 10-29 and in its place substitute the following paragraph:

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These glue lines may be from about 1/32 of an inch (0.8 mm) or smaller in width to about 3½ inches (91 mm) in width or larger, and ideally range from about 1/8 inch (3.2 mm) in width to about 2 inches (51 mm) in width. The spacing between them may be the same as the width of the glue line or it may be different. Additionally, the glue lines may have varying widths. An ideal arrangement is for the glue lines to have a width of 1/8 inch (3.2 mm) and for the space between each glue line to also be 1/8 inch (3.2 mm). This spacing creates a material that has transverse gathers or pleats. It has been found that these transverse gathers greatly improve the comfort and fit of the pant and panel as well as increase the elastic range of the panel. That is, panels constructed with these transverse elastic gathers show a greater percentage elongation for the same tension and size of elastic filament than a panel that does not have these transverse elastic gathers. Depending on the type of adhesive and the amount used, the glue lines may result in attached zones in which the composite has reduced elasticity, regardless of the elasticity of the elastic, i.e., a zone of little or no elasticity in

B7 the panel. Alternatively, ultrasonic bond lines can replace the glue lines. These types of material are the subject of a separate patent application, which was filed on the same date as this application in the name of Fell et al., serial number 09/215,951 filed December 18, 1998, which application is incorporated herein by reference.

A marked up version is attached as Exhibit 10.

Please delete the paragraph starting at page 15, lines 17 through page 16, line 17 and substitute in its place the following paragraph:

B8 Breathable members have a water vapor transmission rate (WVTR) that is equal to or greater than 500 g/m²/24 hours. Ideally, breathable members have WVTR of equal to or greater than 1000 g/m²/24 hours. Optimally, breathable members have WVTR of equal to or greater than 2000 g/m²/24 hours. Such materials may be used, for example as a backing member. Materials having a WVTR as high as 8,000 g/m²/24 hours or greater may be used for side panels. The WVTR is calculated in accordance with ASTM Standard E96-95. Thus, circular samples measuring three inches in diameter are cut from each of the test materials and from a control, which is a piece of CELGARD® 2500 film from Hoechst Celanese Corporation of Sommerville, New Jersey. CELGARD® film is a microporous polypropylene film. Three samples are prepared for each material. The test dish is number 60-1 Vapometer pan distributed by Thwing-Albert Instrument Company of Philadelphia, Pennsylvania. One hundred milliliters of water is poured into each Vapometer pan and individual samples of the test materials and control materials are placed across the open tops of the individual pans. Screw-on flanges are tightened to form a seal along the edges of the pan, leaving the associated test material or control material exposed to the ambient atmosphere over a 6.5 centimeter diameter circle having an exposed area of approximately 33.17 square centimeters. The pans are placed in a forced air oven at 100°F (32°C) or 1 hour to equilibrate. The oven is a constant temperature oven with external air circulating through it to prevent water vapor accumulation inside. A suitable forced air oven is, for example, a Blue M Power-O-Matic 60 oven distributed by Blue M. Electric Company of Blue Island, Illinois. Upon completion of the equilibration, the pans are removed from

the oven, weighed and immediately returned to the oven. After 24 hours, the pans are removed from the oven and weighed again. The preliminary test water vapor transmission rate values are calculated with Equation (1) below:

B8 (I) Test WVTR = (grams weight loss over 24 hours) x 315.5 g/M²/24 hours.
The relative humidity within the oven is not specifically controlled.

A marked up version is attached as exhibit 11.

Please delete the paragraphs starting at page 19, line 19 and ending on page 20, line 10 and substitute in their place the following paragraphs:

B9 The total capacity of the absorbent pad is determined using the absorbent pad, the bodyside liner, the backing member or outer liner, and the outer member. The saturated retention capacity is a measure of the total absorbent capacity of an absorbent garment. The saturated retention capacity is determined as follows. The absorbent garment to be tested, having a moisture content of less than about 7 weight percent, is weighed and submerged in an excess quantity of the room temperature (about 23°C) saline solution described below. The material is allowed to remain submerged for 20 minutes. After 20 minutes the absorbent garment is removed from the saline solution and placed on a TEFLON® coated fiberglass screen having 0.25 inch openings (commercially available from Taconic Plastics Inc., Petersburg, N.Y.) which, in turn, is placed on a vacuum box and covered with a flexible rubber dam material. A vacuum of 3.5 kilopascals (0.5 pounds per square inch) is drawn in the vacuum box for a period of 5 minutes. The absorbent garment is weighed again. The amount of aqueous liquid retained by the material being tested is determined by subtracting the dry weight of the absorbent garment from the wet weight of the absorbent garment (after application of the vacuum) and is reported as the saturated retention capacity in grams of aqueous liquid retained.

The saline solution is an aqueous solution of about 0.9 percent sodium chloride by weight. A suitable product is S/P® Certified Blood Saline commercially available from Baxter Diagnostics in McGaw Park, Illinois.

A marked up version is attached at Exhibit 12.

Please delete the paragraph at page 25, line 3 through page 25, line 8 and substitute in its place the following paragraph:

B¹⁰ Ideally, the fabric of the bodyside liner is surface treated with a surfactant such as that commercially available from Union Carbide Chemicals and Plastics Company, Inc., of Danbury, Connecticut, U.S.A., under the trade designation TRITON® X-102. As used herein, the term "fabric" refers to all of the woven, knitted and nonwoven fibrous webs. The term "nonwoven web" means a web of material that is formed without the aid of a textile weaving or knitting process.

A marked up version is attached as exhibit 13.

Please delete the paragraph starting at page 25, line 15 through page 26 line 4 and in its place substitute the following paragraph:

B¹¹ The crotch elastics are sandwiched in-between the backing member and bodyside liners. Alternatively, the crotch elastics may be sandwiched in between the backing member and outer member. They may be held in place by adhesives, ultrasonic bonding, heat, pressure or any other technique known to the art for holding elastic in place. Optimally, by way of example and without limitation they may be held in place by an adhesive placed in a spiral pattern. The elastics may be made from any material known in the art, such as LYCRA® from Dupont, Wilmington, Delaware or GLO SPAN® from Globe Manufacturing Company, Fallriver, Massachusetts. The elastics may be in ribbon form, sheet form, string form, yarn form, or any other type. They may also be heat activated. Ideally, they consist of 3 strands of LYRCA® having a decitex of about 940. Although 3 strands of crotch elastic are shown in the Figures, it is understood that more or less may be used. Further examples of the types of elastics and the manner in which they are affixed are provided in Heran et al. U.S. Patent No. 4,642,362, Strohbeen et al. U.S. Patent No. 4,610,681 and Ales et al. U.S. Patent No. 4,639,949, the disclosures of which are herein incorporated by reference. Further, the crotch elastics may extend along the leg cut out and into the area of the back of the

B11 chassis. In this way, crotch elastics may extend to or past the point where the side panels are joined to the chassis.

A marked up version is attached as exhibit 14.

Please delete the paragraph starting at page 28 lines 21 through page 29 line 2 and substitute in its place the following paragraph:

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The front fastening panel may be made from any material that has a surface that will adhere to the surface of the closure devices. Such closure devices are well known to the art and may include by way of example and without limitations, mechanical fasteners; adhesive tapes; adhesive tabs; buttons; ties; VELCRO [Velcro]®; hooks; clips; snaps; hook and loop; bottom and loop; interlocking hook; hook and hook type devices. A preferred material for the front fastening panel and one that is readily refastenable to hook closure devices is the material described in the co-pending Stokes U.S. patent application no. 754,419, filed December 16, 1996, which is assigned to Kimberly-Clark, and which is incorporated herein by reference.

A marked up version is attached as exhibit no 15.

Please delete the paragraph starting at page 29 lines 13 through page 30 line 10 and in its place substitute the following paragraphs:

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On the outside of the absorbent pad there may be a backing member 16, which may cover the absorbent pad. Further details of the construction and composition of such products are disclosed in co-pending United States patent applications filed on December 18, 1998 in the names of Datta et al., titled "Refastenable and Adjustable Pant" (serial number 09/215,866) and in the names of Fell et al., titled "Stretchable Composite Material Having Continuous Gathers" (serial number 09/215,951), which are assigned to Kimberly-Clark Corporation, and the disclosures of which are both incorporated herein by reference. In another example of the pant, the elastic side panels may be a single elastic panel that extends across the entire back of the product. A product is provided having a general configuration of the type shown in Figure 3. In this example, the elastic panels are joined together to form a single elastic panel 111

attached to the chassis. This single panel can be viewed as having two portions, a left and a right divided along the center line of the pant.

B13 In use, the pant is positioned on the user and fastened by securing the closure devices 8 and 9 to the front fastening panel 51, as is shown in Figure 2. When the pant has been soiled, it is removed from the user and it can be folded into a convenient pouch by folding or rolling the front side 2 towards the back and by also folding or rolling one of the elastic side panels in. The remaining elastic side panel is then wide enough and has sufficient elasticity to encircle the entire rolled up configuration and close onto itself creating a convenient pouch for disposal. Because of the width of the elastic panel, it will impart elastic properties to the pouch. Moreover, the use of a single elastic panel to encircle the product making a pouch increases the ease of handling the product for disposal purposes. It creates a discrete package for disposal. Also, if the elastic panel has pleats or other structure, it provides better grip making the pouch easier to handle.

A marked up version is attached as exhibit 16.

In the Claims:

Please amend the claims as follows (a marked up version of is attached as Exhibit 4):

B14 1.(amended) A pant comprising a chassis and a pair of elastic panels; the pant having a front end and back end; the chassis comprising an absorbent core, a backing member and a bodyside liner; the chassis further having a length and a width and a front end and a back end; the chassis front end having a fastener; the elastic panels having a width and a length; the elastic panels being elasticized along the majority of their length and width; the elastic panels adjacent the chassis and toward the back end of the chassis; and the width of at least one of the elastic panels being such that the panel when stretched can encircle the pant when used.

sub 3 2.(amended) The pant of claim 1 wherein said at least one [on] elastic panel is wide enough to encircle the used pant at least 1½ times.